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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/321,967	05/28/1999	RICHARD L. FRANK	ORA99-09(OID)	7319

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EXAMINER

ZHEN, LI B

ART UNIT PAPER NUMBER

2151

DATE MAILED: 07/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/321,967

Applicant(s)

FRANK ET AL.

Examiner

Li B. Zhen

Art Unit

2151

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 28 May 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 6 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The method of claims 6 and 9 recite "selecting between the proposed figure of merit and determining an alternate figure of merit..." (claim 6, lines 2 – 3; claim 9, lines 3 – 4). The step of selecting only provides one choice: "the proposed figure of merit."

The method of selecting appears to be between two choices or more, and the claims provided only one. For the purpose of examination, the examiner will assume "selecting between the proposed figure of merit and an alternate figure of merit derived by assessing merit criteria for the member node," as best understood and as it appears to be.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1, 2, 5, 6, and 12 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by U.S. Patent No. 6,192,401 to Modiri.

As to claim 12, Modiri teaches (column 2, lines 20 – 45) a figure of merit (weighting value to each node) indicating a value for a member node to continue operation (base cluster membership upon weighting factor...by favoring most valued nodes). As to querying an application program, Modiri teaches that the method of determining a figure of merit may be implemented in software (column 2, lines 60 – 62).

As to claim 1, Modiri teaches (column 2, lines 20 – 45) a management program (cluster management software), an application program (software modules are responsible for determining membership in the cluster, column 6, lines 30 – 35) determining (assigning) a figure of merit (weighting value to each node) indicating a value for a member node to continue operation (base cluster membership upon weighting factor...by favoring most valued nodes).

As to claim 2, Modiri teaches (column 2, lines 40 – 46) assessing merit criteria for the member node to determine figure of merit (weighting value may be based upon various factors).

As to claim 5, Modiri teaches (column 6, lines 45 – 50) a proposed figure of merit (static weight is set by configuration).

As to claim 6, Modiri teaches (column 6, lines 45 – 60; column 8, lines 47 – 61) selecting between the proposed figure of merit (static weight) and an alternate figure of merit (dynamic weight).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Modiri in view of U.S. Patent No. 5,325,526 to Cameron.

As to claim 3, Modiri teaches (column 2, lines 40 – 46) the figure of merit may be based upon various factors such as relative processing power of the node, amount of physical memory, etc. However Modiri does not disclose using execution priority of an application to determine figure of merit.

However, Cameron teaches (column 11, lines 1 – 6) that figure of merit (partition priority) can be associated with application priority.

It would have been obvious to apply associating application priority with figure of merit as taught by Cameron to the invention of Modiri because using application priority to determine the importance of a partition to continue operating would insure that applications with high priority would continue processing.

As to claim 4, Modiri teaches (column 2, lines 40 – 46) the figure of merit may be based upon various factors such as relative processing power of the node, but does not specify determining the number of users executing from the node.

However, Cameron teaches (column 9, lines 22 – 37) determining (manage) the number of users (a list of consumers) executing from the node (using the nodes of a partition).

It would have been obvious to apply determining the number of users executing from the node as taught by Cameron to the invention of Modiri because the number of users executing on the node would determine the processing load of each node.

7. Claims 7 – 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Modiri in view of U.S. Patent No. 5,999,712 to Moiin.

As to claim 7, this is the same as claim 1 with the addition of evaluating node figure of merit to determine partition figure of merit, selecting a cluster partition to operate as network cluster in response to partition figure of merit, and halting the operation of the remaining cluster partitions. Modiri teaches (column 2, lines 48 – 62) evaluating node figure of merit to determine partition figure of merit (weighting values of each subset are combined to calculate a first and second value for the first and second possible cluster configuration), selecting a cluster partition to operate as network cluster in response to partition figure of merit (membership is chosen based on the first and second values). Modiri does not specify halting the operation of the remaining cluster partitions.

However, Moin teaches (column 13, lines 15 – 22) halting the operation of the remaining cluster partitions (issue command pdadmin stopnode to one set of nodes).

It would have been obvious to apply halting the operation of the remaining cluster partitions as taught by Moin to the invention of Modiri because it would prevent the remaining clusters from corrupting data and files that belongs to the selected partition cluster.

As to claim 8, see the rejection of claim 5 above.

As to claim 9, see the rejection of claim 6 above.

8. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Modiri and Moin in view of Cameron.

As to claim 10, Modiri teaches (column 2, lines 40 – 46) the figure of merit may be based upon various factors such as relative processing power of the node, amount of physical memory, etc. Modiri as modified by Moin does not disclose using execution priority of an application to determine figure of merit.

However, Cameron teaches (column 11, lines 1 – 6) that figure of merit (partition priority) can be associated with application priority.

It would have been obvious to apply associating application priority with figure of merit as taught by Cameron to the invention of Modiri as modified by Moin because using application priority to determine the importance of a partition to continue operating would insure that applications with high priorities would continue processing.

As to claims 11, Modiri teaches (column 2, lines 40 – 46) the figure of merit may be based upon various factors such as relative processing power of the node, but does not specify determining the number of users executing from the node.

However, Cameron teaches (column 9, lines 22 – 37) determining (manage) the number of users (a list of consumers) executing from the node (using the nodes of a partition).

It would have been obvious to apply determining the number of users executing from the node as taught by Cameron to the invention of Modiri as modified by Moin because the number of users executing on the node would determine the processing load of each node.

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9. Claims 1, 2, 5 – 9, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,999,712 to Moin.

As to claim 12, Moin teaches (column 3, lines 10 – 20; column 4, lines 20 – 40; column 6, lines 35 – 45; column 11, lines 59 – 67) querying (send RECONF\_msg to each node) and application (function membership\_proposal()) for a figure of merit (data representing the optimal new cluster) to determine cluster membership. As to the figure of merit indicating a value for a member node to continue processing, each node broadcasts data representing the optimal new cluster. Therefore, when a node includes itself in the new optimal cluster data, it in effect provides a value to indicate for it to continue processing.



As to claim 1, this is a method claim that corresponds to product claim 12 with the additional limitation of a management program (CMM, cluster communication monitor; column 3, lines 10 – 20 of Moiin).

As to claim 7, this is the same as claim 1 with the addition of evaluating node figure of merit to determine partition figure of merit, selecting a cluster partition to operate as network cluster in response to partition figure of merit, and halting operation of the remaining clusters. Moiin teaches (column 4, lines 30 – 35; column 13, lines 15 – 22) selecting a cluster partition to operate as network cluster in response to partition figure of merit (the new cluster represented by more proposed new clusters than any other is elected as the new cluster) and halting the operation of the clusters that was not chosen (issue command pdbadmin stopnode to one set of nodes).

As to claim 2, Moiin teaches (column 6, lines 57 – 67; column 7, lines 1 – 7) assessing merit criteria for the member node to determine figure of merit (above set of rules defines an optimal membership set).

As to claims 5 and 8, Moiin teaches (column 4, lines 25 – 30) a proposed figure of merit (data representing proposed new cluster).

As to claims 6 and 9, Moiin teaches (column 11, lines 60 – 67; column 12, lines 48 – 66) selecting between the proposed figure of merit (compare the proposed set from the other nodes) and an alternate figure of merit (find optimal subset of  $M_i^{prop}$ ).

10. Claims 3, 4, 10, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moiin in view of U.S. Patent No. 5,325,526 to Cameron.

As to claims 3 and 10, Moiin does not teach using execution priority of an application to determine figure of merit.

However, Cameron teaches (column 11, lines 1 – 6) that figure of merit (partition priority) can be associated with application priority.

It would have been obvious to apply associating application priority with figure of merit as taught by Cameron to the invention of Moiin because using application priority to determine the importance of a partition to continue operating would insure that applications with high priorities would continue processing.

As to claims 4 and 11, Moiin does not teach determining the number of users executing from the node.

However, Cameron teaches (column 9, lines 22 – 37) determining (manage) the number of users (a list of consumers) executing from the node (using the nodes of a partition).

It would have been obvious to apply determining the number of users executing from the node as taught by Cameron to the invention of Moiin because the number of users executing on the node would determine the processing load of each node.

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li B. Zhen whose telephone number is (703) 305-3406.

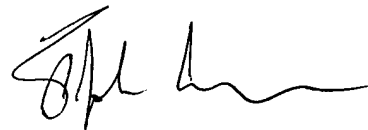
The examiner can normally be reached on Mon - Fri, 8am - 4:30pm.

The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Li B. Zhen  
Examiner  
Art Unit 2151

lbz  
July 11, 2002



ST. JOHN COURTENAY III  
PRIMARY EXAMINER